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ABSTRACT

This book is concerned with the skill of learning to read and factors primarily related to teaching the beginning reading skills. The contents include: "Rationale," which discusses abilities related to reading, reading as a different medium, decoding coming before reading, decoding as separate from reading, hypotheses for decoding, and a demonstration using the previously discussed decoding skills; "Glass-Analysis for Perceptual Conditioning," which looks at an approach for beginning reading instruction which utilizes shaping for perceptual conditioning and requires the learner to examine known words, out of context, both visually and auditorially, to develop instant visual clustering of letters with their associated sound: and "Considerations," which looks at the Glass-Analysis technique in terms of opportunity to differentiate, to redefine difficulty, to determine structural letter sound frequencies, and to screen for decoding ability. (WR)

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TEACHING DECODING AS SEPARATE FROM READING

FREEING READING FROM NON-READING TO THE ADVANTAGE OF BOTH

GERALD G. GLASS

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To Esther and our children.

I. Rationale

TO *TEACH* READING

We must become more successful in teaching reading. All who purport to contribute: classroom teachers, reading specialists, linguists, psychologists, physicians, "researchers,"—must direct their efforts toward developing rationale, gathering essential data, and applying appropriate methods to teach children and illiterate adults to read. This must be seen in contrast to the concerns of teachers of literature and other subject areas who make the assumption that the students already are able to use the reading medium; their primary responsibility, is to involve the students in the process of reading as it is applied in prescribed areas. Instructionally, the former are concerned with the "learning to read" while the latter are concerned with "reading to learn." We, here, will be primarily concerned with

the former, the learning to read aspect. Our concern is with developing (in children or adults) the ability to use the printed form as a medium for communication.

ABILITIES ALREADY LEARNED

Before coming to reading, children (and older persons of any age) use communication channels which have developed "naturally" without formal instruction. From birth, children, as an integral part of their development, learn to discriminate the world around them by utilizing their senses. Initially, sounds that are merely heard as noises in time become clearly discriminated as cues and signals. It is, then, simply maturation that causes a *listening* vocabulary to be acquired. In like manner, maturation per se results in the development of *visual* ability to a highly discriminating level. Similarly, children learn to discriminate and give meaning to their environments in terms of touch, smell, and taste. Each maturing child, in his own uniquely innovative and interdisciplinary way, utilizes the reciprocality of all senses to shape overt responses and internal reactions. Although these are learned, very little, if any, of these learnings need be, or even can be, taught.

A child coming to the stage of being *ready-to-learn-to-read* comes with relatively sophisticated visual, auditory, and mental abilities which are utilized in his *learning to read.* They were "learned" but not formally taught.

READING IS A DIFFERENT MEDIUM

Reading, by design, necessitates that the reader learn to use his senses to communicate in a way not maturationally determined. Print is offered without the dynam-

ic dimensions used since birth. *Meaning*, when one is reading, must now be drawn from a mute and flat environment of letters clustered together to form words. Seeing and hearing channels must utilize cues quite different from those available in the past. For example, the learner when he looks at markings that we know to be *c*, *o*, and *w* must (minimally) bring to mind the sound "cow" even though what he actually sees is in no way a cow. The word does not look like, feel like, (or smell like) what he has been previously utilizing to bring the sound "cow" to mind. He cannot even have the familiar cue of hearing the sound spoken by someone. The "cow" he sees in print must bring to mind any thoughts he would have if he actually were to see a cow, a picture of a cow or the many sound and sight abstractions he has learned for cow.

(A point needs to be made here concerning what is seen. Although one can "see," this vision of the printed word has as little relationship to the cow as vision has in identifying one's own mother vs. a woman one has never seen before. The eyes are used to look at both women, but the visual ability itself is quite inadequate to interpret the stimuli. One must have something more than vision to deal correctly with what is seen.)

DECODING COMES BEFORE READING

It is beneficial that persons concerned with the *teaching* of reading see it didactically, i.e., in discrete activities which developmentally build upon one another to a level where we can behaviorally observe that one "can read." It is also advantageous to see instruction as something that can be offered in a relatively parsimonious and simple manner. (It is much less fruitful, for the purpose of teaching, for the teacher to see reading

simply as a gross activity pursued to gain meaning.)

Reading authorities would consider that one truly can *read* only if one is able to: decode the written word, obtain meanings of prescribed dimensions from the decoded words, react to and utilize these meanings for academic and personal growth. It is apparent that if a person is merely able to identify the sound of a word (decode), he is not reading unless he can at the same time respond with meaning. However, it must also be made apparent that, if one is to learn to read, one will never have the opportunity to respond to meanings already known (or to develop new meanings via the printed word) if the decoding ability is not there first. The person who could not decode would admittedly still have a wide range of avenues open to communicate but the avenue of reading would be blocked.

While decoding is obviously not reading, reading cannot come about without decoding. As a child can learn to listen only after he can hear, a child can learn to read only after he has developed the ability to decode. Hearing a person speak does not assume that the hearer is either listening or understanding (noise vs. signal.) However, it would be impossible for listening and understanding to come about were the person not able to hear. Similarly, merely because a person is able to decode does not mean that he is able to read, i.e., to understand and to deal with meanings via the printed word. *However, it is crucial to reiterate that it is impossible to read if decoding ability is not first developed.*

Thus we can state what at first only seems a contradiction: decoding is at once a least important aspect of reading, and at the same time the most crucial aspect of reading. If one does not learn to decode efficiently and effectively, one will never be allowed the opportunity to read, i.e., deal with and react to meaning via the

printed word. An analogy of the relationship of the steering wheel to the automobile comes to mind. The mere knowledge of the operation of the steering wheel is rather low on the level of importance when one is concerned with the ability to maneuver and make appropriate driving decisions. However, if one does not know this relatively low level skill of steering the car (or if the wheel itself is not there), this could keep one from either developing or utilizing the higher level skills needed for driving. The key for the ignition is at once a relatively unimportant factor in the operation of a car but without it, a whole process would be at a standstill. Similarly, although decoding is not reading, reading is not, without decoding. *Decoding* is here defined as the act of correctly determining the accepted sound connected with a printed word. *Reading*, minimally, is dealing with word meanings.

DECODING IS SEPARATE FROM READING

There are instructional advantages in keeping the teaching of decoding operationally separate from the teaching of reading. Learning to decode is on a lower cognitive level than learning to read and thus is less difficult to acquire. Decoding is only a limited skill (vs. reading.) It is much more accessible to the effects of simple conditioning or habit formation. Let us attempt to explain why.

In decoding we almost always want only one sound-response to the word stimulus. We want this sound-response no matter who the responder is. The correct sound of the word is the same no matter who is making the response. The proverbial, bright, creative, culturally advantaged decoder when he sees *cow* must come up

with the identical sound-response as the low achieving, relatively phlegmatic "disadvantaged" decoder.

Both must arrive at the sound that is "cow."

In decoding we are looking for a relatively narrow response; a response that does not allow for uniqueness and/or creativity. In contrast, when we are in the area of *reading* (vs.decoding), we find the situation dramatically different. Linguists tell us that no word can ever *mean* the same thing twice. Meaning is dependent upon the word's place in the sentence and that sentence's place in the paragraph. In addition, each child brings to the abstraction "cow" his own individual intelligence, readiness, experiential background, and infinite number of factors unique to him. Good reading instruction taps and extends these individual differences and correctly does not aim at making reading something of a homogeneous consensus.

To reiterate, decoding, in contrast to reading, does not have to allow for individual responses; all are taught to make the *one* correct decoding response. It is from this correct decoding response that each individual can go on his own into reading. Decoding is merely identifying a prescribed correct sound. Reading has no limits; it is truly developmental.

Since the decoding task is limited, we can logically assume that individual differences in students are less relevant when decoding than when reading. If the task is limited, then, by definition, it should be easier to learn. Thus, if we can separate and hold in abeyance the teaching of reading (the more difficult) from the teaching of decoding, more youngsters would have an opportunity to learn to decode. This is fortunate, for it is an easily observed fact that the overwhelming number of "reading disability" cases are, in actuality, decoding deficient cases. We know that if youngsters (and surely

adults) could develop the ability to decode, their reading level would dramatically move toward their expectancy level. This level is generally determined by factors related to intelligence and experiential background). It is quite common to hear, "He has little difficulty understanding the material if you read to him but once he has to *read* it on his own, he is over his head." Substitute "decode" for "read" and you will see the point being made. We could help many to improve dramatically in reading level simply by teaching all to decode efficiently and effectively.

HYPOTHESES FOR DECODING

In light of what is commonly done in the name of "decoding" (word-analysis) in basals, workbooks and other published programs, it is important that we carefully and objectively examine what is involved in the teaching of decoding. It is the purpose of this section to demonstrate that too many of our widely used and accepted methods of teaching decoding are either unreasonable or unwarranted in light of the task involved. It will also be demonstrated that too many of the activities which include workbook-type exercises may actually be detrimental to the development of proficiency in decoding.

The following eight positional points need to be made:

1. In light of our previous call for a didactic model in reading instruction, it is beneficial to consider the actual teaching of decoding instructionally separate and apart from the teaching of reading. The acceptance of this consideration should not be difficult. We know that reading, even at its simplest level, must be a response to meaning. Just "calling" a word cannot

be considered reading. The reading skill, to be useful in the area of communication, must minimally include the meaning aspect. Thus, decoding is actually an ability that one must have *before* reading can begin. "Reading" can come into play only *after* one knows the sound of a written word.

It is important that the reader understand this. If skills criteria are developed for a program which purports to teach decoding, they cannot be the same as (or even similar to) those criteria developed for reading programs. Reading programs must, of necessity, include factors ranging from simple word meanings to high-level critical reactions. However, by our ordering, the activity of decoding is much narrower and limited in scope and must merely include those skill activities which teach the identification of the accepted sound of a word.

Statement #1: Decoding is not reading. Decoding should be taught separately from Reading.

2. Although reading must include the factor of meaning, decoding may or may not include the factor of meaning. This can clearly be demonstrated. (The importance of understanding this fact will be seen when recommendations are made for a method to teach decoding.) One can, with ease, decode possible words such as: *blant, dexnap, philope, shantug,* without even guessing at their meaning. The decoding is not dependent upon meaning. Those approaches which ask the pupil to decode on the basis of the possible meaning of the word are dealing in an unstable area. Very few words, except for examples of onomatopoeia such as *bang, crash,* and *oops*, derive their sound from their meaning. One could not even speculate on the meaning of words such as *charm, here, heart,* and *thesaurus* from the sounds represented by the orthography of

each word. Thus, for all decoders of the English language, except for possibly the philologists, sound-symbol relationships are not related to meanings.

However, although the irrelevance of meaning should be understood in the teaching of decoding, it is actually of little significance and of much unnecessary concern. All authorities in the teaching of reading agree that students should not be asked to decode words in context they have not heard before. They recommend that the words to be decoded be in the person's listening and possibly speaking vocabulary as well. An examination of the words introduced for decoding in primary basal and trade readers reveals that almost all are already (by design) within the listening vocabulary of youngsters at that grade level. Therefore, the teaching of meanings with the teaching of decoding is not only poor procedure but is most often irrelevant. If the student already knows the meanings of words, then why spend very important time (and dilute the teaching of decoding) by an inappropriate concern for meaning. *Meaning has to do with reading and not decoding.* Few youngsters at the age of six have less than a few thousand words within their listening vocabulary. This is more than an ample amount of meaningful words from which to teach decoding. To spend time teaching the meaning of known words is not only wasteful but dull. At the very least, it is superfluous.

Statement #2: Teach youngsters to decode utilizing words whose meanings they already know. Then meaning is made irrelevant to the instructional session and all effort can go toward learning to decode.

3. The use of picture clues may, at times, aid in discovering the sound represented by a word. However, let us consider how the intrusion of pictures may negatively affect learning to decode. According to the

"Gestalt factor", the child must first utilize those items in the environment which are instantly recognized. When one sees a picture of a hat with the word "hat" written under the picture, one will have no choice but to respond immediately to the picture of the hat and to *think* "hat." He will not have the opportunity to deal with (or practice) any activities which would aid in the *decoding* of "hat." Here the instant identification of the word through the picture is totally irrelevant to the development of a decoding skill. It is like whispering the sound of the word in the ear and then saying that learning to decode is fostered.

Likewise, decoding ability may be hampered by teaching decoding through the use of clues offered by a phrase or sentence context. To ask a person to determine the sound of a word from its context is an opportunistic approach too dependent upon the lack of ambiguity in the context and the person's general experience and sophistication with the language. It is not related to decoding ability. For example, a reader attempting to discover the sound of "bell" in order to utilize its meaning would only need to use context clues in a sentence such as, "The boy walked up to the door and rang the ---------." The structure of the sentence is such, that without even seeing the word "bell", one would with a great deal of confidence assume it is "bell." One did not in any way need to use the combined effects of letter-sound elements. All too often it is the consistent use of *context* in word-analysis programs which evolves as a major factor in determining the correct sound of a word. If the formative training in decoding focuses upon the initial use of context, it may undermine the learning, use, and practice of bona fide decoding skills. Context (and pictures) all too frequently may give both the student and the teacher an inaccur-

ate picture of decoding ability. They reflect apparent ability vs. actual ability. In contrast, one who can decode a word out of context is one who can always decode. When actually reading (vs. developing decoding skills), one will have the added clues of context. Context will be used if it is there. But a reader must be able to decode when neither context nor pictures can be helpful.

It becomes apparent that only the placement of letters within a word can reliably determine the "sound of a word", (except in a very few words such as lead, read, etc.) Change any letter in a word and it will not represent that same spoken word. Change the sequence of the letters in a word and again it will not represent the same spoken sound. The particular letters and their placement within the word determine how the word is to be decoded. It may be that many of the word-analysis difficulties which are "discovered" by middle-grade and junior high teachers are the result of the context having become too difficult to shelter the previously concealed weakness in decoding. This is particularly true for potentially bright youngsters who have been able to take good guesses at the sound of a word because the context in the lower grade was relatively simple and included little or no meaning problems.

Statement #3: It would be of advantage to teach decoding in a way that only decoding skills can come into play. This requires that decoding basics be learned out of the context of a phrase or sentence, and without the intrusion of pictures.

4. Instructional manuals, from second grade on, give teachers information on the teaching of syllabication. Basals, phonics programs, and independent workbooks include exercises to give practice in the use of syllabication. It would be very difficult to find

a reading program which does not recommend the teaching and use of syllabication as a prescribed aid toward developing independence in decoding.

It is important that we examine such an all-pervasive approach. What does one do when one uses syllabication to discover the sounds in a word? By definition, "syllabication" is the application of rules or principles which allows the decoder to identify the syllables for the purpose of discovering the sounds made by the letters, particularly the vowels. Thus, according to the most common syllabication rule, when two consonants stand together between two vowels (vccv) the division into syllables occurs between the two consonants as in *pen/cil.* The first consonant (n) ends one syllable and the second (c) starts another. Then, we apply the fact that vowels within the syllable (closed) are usually "short." A reader who wants to determine the sounds in *pencil* can see that the first syllable ends with an *n,* and that *e* and *i* are enclosed and, therefore, are short. But he is also taught to watch for consonant digraphs. The two consonants may be digraphs (ch, ph, sh, th), and digraphs are, according to syllabication, treated as single consonants. One cannot split digraphs (machine, mother.) The vccv rule must be used with discretion.

Another basic rule advises that if a word to be decoded has one consonant (or digraph) standing between two vowels (vcv), the consonant (or digraph) is said to belong with the second vowel, with the result that the first vowel is long. Thus, "motor" receives its accepted sound. However, as the child scans a vcv word to discover its sound, he again must not be impetuous. The vcv rule does not apply if the first syllable is accented. Then, the first vowel is short, as in *rapid, veteran,* and *cover.*

Syllabication thus asks a child to scan words carefully, looking for vccv combinations, vcv combinations and to know when this does not apply in words where accent determines vowel sound. He would also need to know that a prefix and a suffix usually form their own syllable *regardless* of any rule about consonants between vowels (hunter.) However, this does not hold in words such as *mailed* and *flagged* since the *ed* is not preceded by a d or t. Also, if a word of more than one syllable ends in *le* (maple, table), one must not apply the vccv rule because the *le* plus the preceding consonant form a new syllable. We must also be cognizant of the fact that when a syllable ends in an *e*, it frequently affects the sound of another vowel in that syllable. Confused?

Obviously, the use of syllabication to aid in decoding is, at its very best, detailed, complex, and often contradictory. The coup-de-grace of the utilization of sequence and frequency of consonants and vowels (the essence of syllabication) is the rule that determines the sounds of the aforementioned *rapid* and *veteran.* This rule advises that in vcv "the consonant usually goes with the second syllable if the preceeding vowel is long and with the first syllable if the vowel is short." *Syllabication actually asks the decoder to know the sound of the unknown word to determine the sound!* If the child already knows what the word "says", why would he need to apply syllabication to help him discover the sound of the word?

Adults (including teachers) persist in stating that they use "syllabication" to help them identify unknown words. We have checked very carefully with literally hundreds and hundreds of adults and have yet to find one who actually uses syllabication principles or rules when sounding out an unknown word. On close exam-

ination, one observes that syllables are identified *after the sounds* within the word are known. No one in our observation has ever used syllabication principles to discover the sounds within a word. *The sounds in the word were used to determine the syllable division, and not vice-versa.* The identification of syllables is apparently a visual process that has no conscious rhyme or reason other than "the word seemed to sound that way." In a more esoteric way: certain clusters of letters represent sounds which, when combined, resulted in a word that sounded familiar or credible. Again, the crucial point to be made is that discovering syllables in a word came *after* knowledge of the sound of the word and not before. The decoding of a word after one knows the sound of the word is obviously superfluous. Why syllabication? We have yet to find any defensible purpose for this activity to be included.

An examination of blackboard and workbook syllabication exercises would make apparent the obvious—that these exercises are invalid. In spite of what the directions on a workbook page say, one can not ever use "syllabication" in the all too common exercises which ask for the identification of syllables within words. These exercises always assume that the reader knows the sound of the whole word before he/she will be expected to syllabicate.

Our studies have shown that rarely, if ever, do youngsters syllabicate by the use of rules or principles. They merely sound out the "syllables" where the breaks seem appropriate. There seems to be no apparent reasoning or application of principle. If you were to observe how both beginners and adults decode an unknown word, it would be apparent that only in a very structured syllabication lesson does one look for vccv, vcv, digraphs, and the like.

Why don't you, the reader, become part of a demonstration? Look at the following possible word: *prechiming*. . . decode it. Did you use syllabication rules? Did you scan and decide, on the basis of principles (or rules), where a syllable fell so that you would know the sound of the vowel? If you did, you are indeed (according to our information) quite rare. Whatever you did, you most surely did not apply syllabication principles.

Reasonable concern may arise: If adults do not use rules or principles which allow for a systemic approach to decoding, it might be that they do not do this because they have been so successful at the operation for so many years that they have forgotten what these rules were that they used in the past. It may be that students in the formative stages of developing a decoding system use rules and principles and thus we would be depriving them of an aid if we did not include it in our instruction. Our staff did a study to discover whether or not readers at a formative stage do use rules or principles. Thirty students in grades 2 and 5 were tested. All the students were considered excellent readers at their grade level. They were all at least in the top fifth of their class in decoding ability. The youngsters were asked "to sound out" fifteen words which would be esoteric for them. They also were asked to sound out fifteen constructed possible words. A significant finding: Not one child in the group used any of the principles of word attack *before* the word was sounded out. Some said they did use "phonics" or "syllabication" but it was apparent by their rapid recognition of the whole sound of the word that they did not pause to apply rules or principles. They merely sounded out the words letter-cluster-by-letter-cluster as persons of all ages do.

Statement #4: Syllabication is not used for decoding.

It should not be part of a decoding program.

5. The idea of including syllabication principles in teaching decoding is part of the prevalent thinking that claims independent word attack is based upon knowledge which can discriminately and rationally be applied when called for. The assumption is that in order to do more than recall whole words at sight by configuration, one necessarily has to have a "plan of attack." This reasoning further assumes that by the intelligent application of so called phonic and linguistic principles, one can be reasonably certain to become successful in decoding.

In contrast, our assumption is that the ability to decode is based less upon the knowledge of rules and principles and more upon an instant response to whole words and/or a conditioned automatic-like response to the structural parts within whole words. Simply stated, we have discovered that successful decoders simply are able to remember what they have seen and heard before. Nothing more! Specifically, successful decoders respond to the whole words and the clusters of letters within the whole words. They merely remember the sound which common discrete visual elements represent. Because decoders already know the sounds that are common in the English language, they can sequence sounds and produce a whole word sound that makes sense. We term the process by which the correct structural parts are identified to form the whole word, Perceptual Conditioning.

Statement #5: Successful decoders do not apply prescribed principles nor do they employ a conscious reasoning process. Thus, the teaching of decoding does not necessitate the use of rules and principles. All successful decoders are so because of their perceptual conditioning abilities.

6. There are general factors of learning which need to be taken into consideration when attempting to explore what is involved in learning and utilizing decoding (word-analysis) techniques.

a) The Gestaltists long ago made us aware that the *size* of a configuration has little or nothing to do with its potential for being "learned." The familiarity resulting from *meaningfulness* and *frequency* is a major determinant of what one will recall and retain. The eleven letter word "grandmother" is less difficult to decode and recall than the four letter word "here." Since the mind's eye does not see "grandmother" as eleven separate letters to be dealt with, it is not necessarily any more burdensome to identify than "here" which has only four letters.

Size of configuration is also irrelevant in identifying parts *within whole words*. If letter clusters within words can be made residually familiar to a reader, he might find the sound of a four letter cluster, such as */ight/* in the word "insightful", no more difficult to identify than the sound of the single letter */o/* in the word "hot." The point to be made is that a single consonant or a single vowel and the sound it represents is not necessarily easier to identify than clusters of letters which are used to represent a common sound.

b) Objects composed of discrete elements initially are, because of perceptual maturation, seen as wholes and then, if necessary, are seen as composed of parts. For example, a very young child first identifies a car, a toy, a house (maybe even a whole word) before he can identify the parts that make up the whole. Only as he matures in his perceptual abilities is he able to "see" parts of the whole. Notice the box with the three numerals

. The three numerals represent "things" that you see. However, with the next box

, you

instantly see only one "thing." The same three numerals became only one numeral. Depending upon how the stimulus is presented, you can see at one time the numerals as three discrete occurrences and, then, instantly see the same numerals as one occurrence.

c) To decode the word "insightful", no one would (or should) deal with each individual letter sound. We would not because a letter-by-letter response to English words would not have been reinforced. Instead, we were reinforced when we learned to respond to letter clusters which represented sounds that led to the correct whole word. We might identify the */in/*, the */s/*, the */ight/*, and the */ful/*, or the */in/*, the */sight/*, and the */ful/*. We do this because in all of our life's experiences of identifying words, this approach has been most successful. No successful decoder could possibly deal with the word insightful either letter-by-letter or by clustering the */sig/*, the */ht/*, the */fu/*, and the */l/*.

Actually, there is nothing in the sequencing of the letters that tells us what clustering we should make. We just never "sound out" in a way which would contradict what we have experienced when we were successful in sounding out previous words.

Statement #6: Words are initially seen as wholes and, then, as composed of parts (letter-clusters) which combine to form the correct sound. Size of configuration is not related to the ease with which persons learn to decode because decoders do not respond to each letter as separate parts of the word.

7. Anyone who has taught decoding knows how important it is for a person to be able to identify the sounds which are part of the sound of the whole word. A decoder is at a disadvantage if he hears a word such as "insightful" as one sound mass, similar to the way he hears the sound made by a book that fell onto the

floor. The book hitting the floor made a discernible noise but not noticeably composed of discrete sound elements. However, in contrast, for decoding purposes, one should be able to tell what sounds can be heard within a word (a sound). This is really what auditory discrimination for decoding is all about.

It is also important to decoding that the reader be able to associate the letters that "make" the sound—visual discrimination for decoding. One must correctly see that */ight/* makes a discernible familiar sound and that the */ig/* or */gh/* or the */tfu/* in the word *insightful* do not constitute the letter clustering that represents the common sounds heard in the word. (The ability described here is much more discriminating than the inherent general abilities of so-called auditory and visual discrimination. Any student who can see well enough to live in the every day world and can hear what is being said has all the auditory and visual discrimination ability he will ever need in learning to decode. What he may lack is the discriminating ability to identify and respond to the appropriate sounds within words and the knowledge of the appropriate letters which represent the sounds he hears in words.)

Statement #7: Correct visual and auditory clustering is of crucial importance to the decoding process.

8. We can view a broad area and, at the same time, subordinate aspects within the view which are not relevant to our immediate concern. To explain: Hold a pencil up to anyone and simultaneously say "What do you see?" Everyone will say "A pencil." Actually, the observer saw a great deal more. He saw your finger, hand, shoulder, head, torso, the area behind you, etc. All this was in view. But he has "learned" to discriminate out of the visual field based upon your question and his learned mental sets.

This suggests that in decoding it is possible, and maybe even natural, for a child to isolate easily a three and a four letter combination (such as /ing/, /ate/, and /ight/) within the whole word and to apply to it a single sound. As was shown, such clusters of letters are seen as one whole rather than three or four separate wholes. Thus, one learns to "see" only a certain part of the complete view, (depending upon one's learned mental set) while at the same time observing the whole. If one learns to see the clusters often enough within whole words, then, the predictable results of such repetition would cause these clusters to be seen within *the whole word* as routinely as one sees single letters within *the whole word.* In addition, if the clustered letters are also associated with their accepted sounds, we have the beginnings of a decoding process as a result of a conditioning process, which, by definition, becomes ingrained.

Statement #8: The learned correct mental set can cause the decoder to see and respond to the appropriate letter-sound structures within a whole word, i.e., to decode correctly.

A DEMONSTRATION

Your careful and patient reading of the rationale may come to fruition with the following: You are asked to decode the following possible word:

DISTENATIONING.

Say the unknown word aloud. . .

Did you read the word at sight or did you sound out the word? You sounded it out since you have never seen the word before.

Did you use syllable or phonic rules such as vccv, vcv, open syllable and closed syllable, two vowels to-

gether, etc.? Of course not! Not only did you not use syllabication (and the like) but you would have never been able to, in the amount of time you took to decode the word.

Did you notice the "little words in the big word" and use the sounds of these words in the analysis? e.g., *at on in.* I hope not, for, if you did, you decoded the word incorrectly.

What, then, did you do to decode the word? You decoded the word the way you did because as a successful decoder, you had no other choice. You have been conditioned through your consistent and extensive dealings with words used in English writing to respond to clusters of letters in an unknown word which "naturally" come together. We see (and hear) within the whole word */dis/ /ten/ /a/ /tion/ /ing/* or possibly */d/ /is/ /t/ /en/ /ation/ /ing/*. But never */di/ /ste/ /ist/ /ena/ /na/ /tio/* or */io/ /nin/* (all of which are phonically possible.)

Your correct decoding included little, if any, of the activities introduced in the word-analysis aspect of reading programs. You did not "cluster" on the basis of a reasoned decision. You did not decide which were the digraphs, which vowels were long or short, which little words and big words contribute to the correct sound of the whole word. You did not use picture or context clues.

A final point—Notice how important *correctness* is. For words which have structures that do not fit a consistent pattern (police, great, mother), you did not respond to the more common sound of /ice/, /eat/, /her/. Your familiarity with the language tells you that the whole word sound produced is not consistent with what you know in the English language. (This we found to be true with first and second graders as well.)

TEACH WHAT IS USEFUL

We hypothesize that you have been incidentally perceptually conditioned to see the appropriate clustering of letters within a whole word. It makes sense, then, that any activity which fosters seeing the correct clusters would contribute a great deal toward developing decoding facility.

It is this writer's belief that unknown words are correctly identified through a learned response which utilizes a conditioned perceptual set. The set is to scan a word instantly for its structural sounding elements (letter clusters), as they have been historically consistent in the decoder's experience. Again, you are asked to examine possible words: *blassment, trepulation, trom* and *deplistrationer.* It is most certain that you "read" the words letter cluster by letter cluster in the way you have learned to anticipate that these letters routinely arrange themselves. It is almost as if there were actual spacings between certain letters to form common structures within the words. You used nothing more than your instant (conditioned) knowledge of these letter clusters.

II. Glass-Analysis for Perceptual Conditioning

If we can agree upon how successful decoders identify unknown words, it would be fruitful to back-track and to develop a way of teaching decoding which would be consistent with what we desire the end result to be. We should include only that which is (or was) used by successful decoders. An approach utilizing shaping for perceptual conditioning has been developed to be consistent with the factors presented and discussed in this text. The approach requires the learner to examine known words, out of context, both visually and auditorially, in a way that would foster instant visual clustering of letters with their associated sound.

Sets and cognitions are developed which result in the organization of the visual and auditory environment into useful patterns. The Set imposes a meaningful (in terms of decoding) organization upon all incoming sensory data. Each learner is "set" to respond in one

way or another. He is said to be physiologically and psychologically ready to respond to certain assigned details rather than to others. Mental sets to "see" and "hear" correctly are carefully controlled by the teacher's complete direction of how a student is to examine a word and identify the sounds within it.

The GLASS-ANALYSIS FOR DECODING ONLY approach is derived from the Perceptual Conditioning Theory of Decoding and understanding of what can reasonably be applied in present day classrooms. GLASS-ANALYSIS is thus theoretically based, internally consistent, and applied.*

MANDATES

Only individual words should be presented to the learner during "training sessions." These words may be printed on flash cards, slides, chalkboard, or any such material. (We use 3" x 6" flash cards.) In the training session, the student does not see more or less than the whole word. When the word is first exposed to the student he is told the sound of the word (e.g., "This word says 'catch'.") It is crucial to understand that in this approach our concern is *not* with the correct identification of the specific words we use in training. Our primary objective is to condition the decoder to identify the appropriate sounds and letters (clusters) in a word he already knows. We want to condition him to cluster visually the "correct" letters and simultaneously to make the "correct" oral response when seeing

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*The reader who may be concerned with rationale and consistency might relate each instructional recommendation to its theoretical base as presented in the Rationale section.

these letters. (*Letter Clusters* are defined as two or more letters that, in a whole word, represent a relatively consistent sound. For example, in *catch* the clusters are */at/ /ch/*; in *play* the clusters are */pl/ /ay/*; in *standard* the clusters may be */st/ /an/ /and/ /ar/ /ard/.*) We do not want the decoder to use any method which might fortuitously be effective for that particular word but which does not have the potential for generalization as does decoding letter cluster-by-letter cluster. Habit formation (for letter clustering) can best come about by frequent and consistent responses along with appropriate and consistent reinforcement.

The decoder should be looking, at all times, at the word. He is advised not to look away or at the teacher while instructions are given to him. We want the structuring of the letters and sounds in the word to come about on the basis of observing the *whole word*, just as it will be seen when read.

As stated, the whole word must always be presented. Parts of words may never be covered up to help with identifying letter clusters. The practice of covering parts of the word and then exposing that part undermines forming the habit of letter clustering within whole words without external clues.

Similarly, the learner should not see words which are put together from structural sounding parts. Do not show the */ent/* and then add a */t/* or an */r/* or an */s/* to help identify the cluster. The correct letter clustering must be seen with letters before and letters after, as when seen during actual reading. The */ong/* in isolation is not the same perceptual image as the */ong/* within the word *stronger*. Again, students must be conditioned to isolate perceptually the letter clusters as they are part of a whole word. (As you did with *distenationing.*)

The teacher always directs how the pupil will examine the word. She is the agent for developing visual and auditory sets. As the decoder is looking at the word, the teacher directs the examination with two basic questions to develop the correct mental set. These questions are:

What *letters* make the . . . . . sound?

What *sound* do the letters . . . . . make?

The type of questioning done in relation to each word is determined by the rationale of GLASS-ANALYSIS. You will recall our purpose is not to teach the identification of the word. The word is a "service word" utilized to help the learner form perceptual conditioning (both audible and visible) for a specific target letter cluster and for other structural parts of the word. Thus, a lesson is not considered complete or successful if the youngster can merely identify the word at sight. The training lesson must include those activities designed to help toward forming correct auditory and visual responses to the appropriate structures within the word.

STEP-BY-STEP

Expose one card to the individual or group. Keep decoders as close to you as practical. Make sure all can see the card and are always looking toward the card. If you keep the card away from your line of vision, it will be easier to see who are looking at the word.

Begin by saying the word and identifying the spelling of the cluster.

"The word says, 'song'. What does the word say? (Response) We are going to learn the o/n/g sound that says 'ong'."

Never separate letters that form a blend, a digraph, or a vowel cluster. Never cover up any part of the whole word. The student never sees less than the entire word.

Song-

In the word, "song", what letter makes the "sss" sound? *In the word, "song"*, what letters make the "ong" sound? *In the word "song"*, what sound does the letter /s/ make? What sound does o/n/g make?

If I took off the /s/ what sound would be left? What is the whole word?

Longest-

(Remember for each word, always say the whole word and frequently identify the target cluster by both letters and sound.)

In the word, "longest", what letter makes the "lll" sound? What letters make the "ong" sound? What letters make the "long" sound? What letters make the "ongest" sound?

In the word, "longest", what sound does the /l/ make?

What sound does the o/n/g make?

What sound does the l/o/n/g make?

In the word "longest", what sound does e/s/t make?

What sound does o/n/g/e/s/t make?

If I took off the /l/ what sound would be left?

If I took off the l/o/n/g, what sound would I have left?

If I took off the "est" sound, what sound would be left?
What is the whole word?

Stronger-

In the word, "stronger", what letters make the "st" sound?
What letters make the "ong" sound?
What letters make the "rong" sound?
What letters make the "strong" sound?

In the word, "stronger", what sound does s/t make?
What sound does the o/n/g make?
What sound does the r/o/n/g make?
What sound does the s/t/r/o/n/g make?
In the word, "stronger", what sound does the e/r make?
The o/n/g/e/r?

If I took off the s/t, what sound would be left?
If I took off the s/t/r/o/n/g, what sound would be left?
If I took off the "strong" sound, what sound would be left?
If I took off the e/r what sound would be left?

Set

In the word, "set", what letter makes the "sss" sound?
What letters makes the "et" sound?

In the word, "set", what sound does the /s/ make?
What sound does e/t make?

If I took off the "sss" what sound would be left?
If I took off the e/t, what sound would I have left?
What is the whole word?

Better-

In the word, "better", what letter makes the "bbb" sound?
What letters make the "et" sound?
What letters make the "bet" sound?
What letters make the "er" sound?
The "etter" sound?

In the word, "better", what sound does the /b/ make?
What sound does the e/t make?
What sound does b/e/t make?
What sound does t/e/r make?
The e/t/t/e/r?

(Note: Double consonants do not affect sound. Teacher may direct attention to the e/t or e/t/t since both result in the same sound.)

In the word, "better" if I took off the /b/ what sound would be left?
If I took off the b/e/t, what sound would be left?
If I took off the e/r, what sound would be left?
What is the whole word?

Forgetfulness- *In the word "forgetfulness"*, what letters make the "or" sound?
What letters make the "for" sound?
What letters make the "et" sound?
The "get" sound?
What letters make the "forget" sound?
In the word, "forgetfulness", what letters make the "ful" sound?
The "forgetful" sound?
What letters make the "ess" sound?
The "ness" sound?
What letters make the "fulness" sound?
What letters make the "getfulness" sound?

In the word "forgetfulness", what sound does o/r make?
What sound does f/o/r make?
What sound does e/t make?
The g/e/t?
The f/o/r/g/e/t?
What sound does f/u/l make?
What sound does g/e/t/f/u/l?
What sound does e/s/s make?
n/e/s/s?

In the word, "forgetfulness", what sound does f/u/l/n/e/s/s make?
g/e/t/f/u/l/n/e/s/s?

If I took off the f/o/r, what sound would be left?
If I took off the "forget" sound, what sound would I have left?

If I took off the "ness" sound, what sound would be left?
What is the whole word?

Fire-

In the word, "fire", what letter makes the "fff" sound?
In the word, "fire", what letters make the "ire" sound?

What sound does the /f/ make?
In the word, "fire", what sound does i/r/e make?
If I took off the "fff", what sound would be left?
What is the whole word?

Umpires-

In the word, "umpires", what letters make the "um" sound?
What letters make the "ump" sound?
What letters make the "ire" sound?
The "ires" sound?
In the word, "umpires", what letters make the "pire" sound?
The "pires" sound?

In the word "umpires", what sound does u/m make?
u/m/p?
What sound does i/r/e make?
i/r/e/s?
What sound does p/i/r/e make?
p/i/r/e/s?
In the word "umpires", if I took off the u/m, what sound would be left?

If I took away the "ump" sound, what sound would be left?
If I took away the "ires" sound, what sound would be left?
What is the whole word?

Entirely-

In the word, "entirely", what letters make the "en" sound?
What letters make the "ent" sound?
The "ire" sound?
The "tire" sound?
What letters make the "entire" sound?
What letters make the "ly" sound?
What letters make the "irely" sound?
In the word, "entirely", what letters make the "tirely" sound?

What sound does the e/n make?
The e/n/t?
In the word, "entirely", what sound does i/r/e make?
t/i/r/e?
What sound does e/n/t/i/r/e make?
What sound does l/y make?
What sound does i/r/e/l/y make?
What sound does t/i/r/e/l/y make?

In the word, "entirely", if I took off the e/n, what sound would be left?
If I took off the e/n/t, what sound would be left?
If I took off the l/y, what sound would be left?
What is the whole word?

FOUR STEPS FOR EACH WORD

1. Identify the *whole word* and the letters and sound of the target cluster.
2. *Give the sound(s)* and ask for the letter or letters
3. *Give the letter or letters* and ask for the sound(s).
4. *Take away letters* and ask for the remaining sound.

NOTE:

a. When working with each word it is not necessary to repeat the service word before each question. Those students who manifest little or no difficulty need only to be reminded of the sound of the whole word two or three times during the sequence. However, students with learning difficulties benefit from the frequent repetition of the word before each question.

b. Do not separate blends (e.g., bl, st, pl) or digraphs (e.g. ch, th, sh, wh). Blends and digraphs are to be seen and heard as wholes within the whole word.

c. Within the word "stronger", we did not isolate the first /r/. There are two reasons for this. First, the assumption is that when the student is working with a letter cluster such as o/n/g, he is quite knowledgeable in identifying the single consonant sound. In addition, isolating the /r/ would make the sounding of the /r/ awkward.

d. There is a recommended procedure with words containing a target cluster and a suffix which includes part of the cluster, i.e. baked (ake), spider

(ide), bravery (ave). Many such words are found in the lists of service words for conditioning to clusters.

When conditioning with such a word, as "spider", order the questions in the following sequence: In the word "spider", what letters say "sp", what letters say "ider", what letters say "ide"? (do not ask for the e/r)—In the word "spider" what sound does the s/p make, the i/d/e/r, the i/d/e? (Do not ask for the "er").

In this way we have trained the decoder to attend to the letter clusters which can be generalized. We have avoided loading the learners with esoteric linguistic concerns about the dropping of the final /e/ before adding the suffix. Further examples:

skater — "ater", "ate"; a/t/e/r, a/t/e.
baker — "aker", "ake"; a/k/e/r, a/k/e.
shaken — "aken", "ake"; a/k/e/n, a/k/e.
diced — "iced", "ice"; i/c/e/d, i/c/e.

e. Work as rapidly as possible. Frequency of responses is an important factor when working for decoding-only habit patterns. Do nothing but decoding in each session and the frequency of responses for shaping of decoding behavior will automatically be increased.

AT-SIGHT DECODING IN GLASS-ANALYSIS

"At sight Decoding" from text material is a necessary part of the GLASS-ANALYSIS program to teach decoding-only. At-sight oral reading gives the important

practice in letter clustering with words met at random. These are the words the students will meet when they read independently. Oral reading also allows for practice in a wider sight vocabulary. It not only adds to the variety of instruction, but also adds to the learning process by offering material (in sentence and story form) in which the student can use and extend the generalizations he acquired during the controlled sequencing in the clustering lessons.

During the learning-to-decode stage of reading instruction every effort should be made to plan for each child to do as much at-sight oral reading as is feasible. Teachers and paraprofessionals may want to schedule practice in at-sight oral reading during times other than the regular GLASS-ANALYSIS instructional session. Students in the formative stage of learning-how-to-decode can never get too much practice in decoding.

The basal reader or any other "controlled" text could be used for at-sight-oral-reading. Be careful that all provide some decoding challenge. Because the GLASS-ANALYSIS decoding sessions do not attempt to engage the learner in comprehension, the instructor is able to use material of greater difficulty than would be used in the normal reading situation. A text used for oral reading to practice decoding is considered to be at too low a level if one can routinely decode 90% or more of the words. Then, in essence, the student is only redoing what he knows and this can be accomplished without the benefit of a teacher listening-in to help.

(In contrast, easy and enjoyable oral reading activities are most appropriately engaged in when students are already able to decode. Then they should be encouraged to read to each other such material as interesting stories, plays or poetry. This kind of oral reading has

many benefits which go beyond the specific behavioral objective of teaching decoding-only via GLASS-ANALYSIS.

Examine carefully the book used by the student for at-sight oral reading. In most cases we would predict that the student could be placed at least one-half year ahead in basal sequence. Uniquely, in the GLASS-ANALYSIS program, we have found that when we work in somewhat difficult material we observe more rapid growth than when we stay at a relatively comfortable routine "success-always" level. Plan to conduct each lesson in a way which consistently challenges the student to strive for higher level decoding abilities.

To reiterate, every effort should be made to include "at-sight" reading in each instructional session. The oral reading should not be halted for purposes other than those which directly relate to decoding. Thus, there should be little or no attempt to aid in diction, vocabulary, comprehension or any of the activities that should appropriately be within nondecoding activities.

In general, during the at-sight oral reading, if the words are being decoded correctly, merely listen and make a minimum of overt reinforcing responses. If the word is not known or not correctly identified, the teacher must instantly decide whether or not the word is a "Nix" word—a word which is irregular in its sound-symbol relationship. If it is a Nix word, (i.e., *laugh, Mary, pretty, what*), merely voice the word and ask the student to repeat it.

If the unknown word (e.g., "canal") contains a common letter cluster, advise the student the letters to attend to and what sound these letters represent. "Look at the a/n in that word. The a/n says 'an'. Now what does the whole word say?" If the student does not say "canal," give the c/a/n sound and ask for the whole

word. If still in doubt, give the sound of the whole word and move on.

If additional time is available during the day for the student to work with someone, we strongly recommend as much at-sight reading as possible. Th can be done for five or ten minute periods, up to three or four times a day for the slow learner. This will aid considerably in transferring perceptual conditioning abilities from the training phase to actual in-book decoding.

TIME

When working with an individual or a group, approximately fifteen minute decoding instructional sessions have proven to be appropriate. This would not include the time working with at-sight reading.

Youngsters who have a history of difficulty in learning to decode would significantly benefit from at least two 15 minute sessions daily, at least one hour apart.

For those students with "severe learning disabilities" we strongly recommend as many daily decoding sessions as possible, with the minimum of one hour spacing. With these children, each session may run for a somewhat shorter time than the regular fifteen minute session.

WHAT DID WE DO?

What have the foregoing activities achieved? We have shaped the perception to examine whole words in a way that we know will be of benefit when seeing other words containing the same letter clusters. We required one to respond *visually* to the letters in the word in appropriate cluster fashion and apply the appropriate sound. We also required one to *hear* an appropriate sound and

then associate the letters within the whole word that "make the sound." (What else is decoding?)

We did not allow the reader to examine the word in any way other than what we know will be consistent with the way he will eventually examine words when he becomes proficient in decoding. He did not, and never will be allowed to, infringe upon the integrity of a digraph, vowel cluster, or any of the meaning or pronunciation units which are structurally consistent within our written language. No successful decoder does!

We have evidence that if any person (particularly a child) is consistently directed to examine whole words in terms of these internal structures (e.g., team, creamery, steaming, streamline, etc.), he theoretically should condition to the appropriate clusters as they are visually isolated within the whole word. This, as has been suggested, is what *all* persons do who are successful in decoding. They use nothing more than a recollection of how letters cluster in whole words. In our training we literally force the issue of clustering.

III. Considerations

OPPORTUNITY TO DIFFERENTIATE

The exposure of only one word at a time for initial basic training in decoding allows for advantages over written material presented on a page. In GLASS-ANALYSIS you can "individualize" for each member in a group because there is no apparent omitting for some and adding for others. What will be presented for decoding can be routinely controlled by the teacher. Teacher decisions will be based upon experience with the student or group. Knowledge of: intelligence, experiential background, chronological age, cultural uniqueness, regional placement, motivation, attitudes, and the infinite other factors which relate and interrelate to each other make each learner and each situation unique and calls for differentiation of instruction.

Differentiation of instruction in decoding can be done in groups as well as when the teacher is working with only one student. "Individualizing" requires that students *in the group* are always thought of individually with particular instructional needs. Fortunately, in teaching decoding-only, students' needs are often overlapping and not narrowly specific. All students in need of training in decoding benefit from looking at whole words and identifying the appropriate visual-auditory cues within the whole word. Because of this and because, in GLASS-ANALYSIS, the student and teacher responses are constant and relatively short, there are no long periods of sitting by while someone else is worked with.

The teacher instructing a group always differentiates the teaching according to the student or group being asked to respond. In a group, a weaker student is questioned on his own level, while a better student is asked to give information on a higher level. Each could benefit from listening-in on the peer's response and the teacher's response to that response.

Differentiation of teaching in a group situation requires that the teacher minimize questions to the group as a whole. Questions should be directed to a particular member with specific instructional needs in mind. A teacher may know that one student is more reticent to respond to questioning and therefore may want to motivate by some supportive comment before the actual question is presented. Other students in the group may need to be kept in close contact with the activities of the group simply by frequent questioning that asks the student to repeat what another member of the group just said. Questions to specific members of the group may range from asking for the simple repetition of information given by the teacher to the higher level

questioning of the student to identify, on his own, the letter and sound association within a whole word. To the extent that the range of decoding ability could be narrowed within a group, the training of each individual student will be applicable to the other members of the group as well.

When working with more than one student, it is best to begin the instructional session by asking for choral responses, i.e. all in the group respond together to each question. After three or four choral responses to your questions, begin directing questions to specific members. It is best not to follow a set order when calling upon individuals. In this way, each will be expected to think through the response because he will not know when he will be called upon. In fact, you may ask the same student two or three questions before moving on to another student. Then, when this seems to become routine, revert back to the choral responses. This aim is to minimize the student's ability to predict when he will be called upon. Teachers have been known to set up "a challenge" where one member of the group is asked to respond to all the questions which utilize a single word. In this situation one person is meeting the challenge while the others look on. Then others in the group might be asked to accept the challenge. This is only an example of a way to diversify the consistency of the question-response mode and even this should be adopted infrequently since the procedure may encourage a one child involvement while others simply wait their turn.

DIFFICULTY IS REDEFINED

The widely held assumption that we must teach youngsters to decode only words which are known to them is,

in this approach, open to serious question. As discussed in the Rationale section, *learning to decode* is not made dependent upon precise careful understanding of language, as is expected in other programs. The service words you may utilize with the GLASS-ANALYSIS approach must make "sense" from a visual and auditory point of view. Merely because the meaning may be elusive does not negate the possibility that the word can be utilized to develop meaningful habits to decode words of similar letter sequence structure.

Thus, be careful not to shy away unnecessarily from words that may seem to be difficult. In other approaches, learning to decode is part of the actual reading program. The approach correctly makes a word "difficult" because the word is one that offers more than the normal abstraction in *meaning*. However, because we instructionally separate the decoding activity from the reading program we can redefine what is difficult and what is not. The "difficult" is controlled by one's movement through decoding and not meanings. When learning to decode, there is no reason why the instructional plan should not ask the learner continuously to attack more complex words to help produce steady improvement.

As stated, the regular reading program will be concerned with the more complex problem of *meaning* difficulty. Allow the decoding program to deal with decoding difficulty only in terms of the complexity of the structure of a word and not the complexity of the word's *meaning*. Our experience has been that if this working hypothesis is accepted, decoding ability is significantly fostered.

WHAT LETTER CLUSTERS ARE THE MOST COMMON?

The question that comes to mind is how many of these letter clusters do we have in our language? Are they so numerous that it would be unreasonable to become conditioned to their existence in words? Or, in fact, do they really exist frequently enough for us to depend upon them in sounding out unknown words? This writer and his staff made an intensive examination of the words used in basals of the first three grades. Words were examined to determine structural letter sound frequencies.

The list on page 44 ranks the most common letter clusters (in whole words) in order of difficulty. Difficulty relates to teachers' reports of what they found to be easier or harder to learn, (e.g., "at" is easiest and "ture" is most difficult).

You should recall that we have assumed it to be as easy to learn that three or four letters relate to a sound as it is to learn that one letter relates to a sound. Note also that if clusters of letters (vs. single letters) are taught as producing a sound, the problem of teaching isolated vowel sounds and their variations is virtually eliminated. A vowel in a letter cluster makes a sound as part of the letter cluster and not because it has a place in a syllable or any other such "rule."

Careful count was made of single consonants, blends and consonant digraphs. It was found that when teaching for perceptual conditioning, these elements are learned relatively easily compared to the vowel letter clusters; that their random distribution throughout words which are chosen only for the vowel clusters

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READING AND STUDY CENTER
GLASS-ANALYSIS for PERCEPTUAL CONDITIONING
List of 117 Vowel Clusters and 2 Consonant Clusters
(embedded in a whole word, underlined when not apparent,
letter in parenthesis does not affect sound)

Starters	Medium One	Medium Two	Harder One	Harder Two
1. sat	1. bed	1. fall	1. fowl	1. her
2. sing	2. big	2. saw	2. bus	2. hair
3. set	3. lip	3. tel(l)	3. fil(l)	3. pal
4. sit	4. mud	4. deck	4. bite	4. tied
5. hot	5. lid	5. nice	5. mes(s)	5. few
6. him	6. den	6. tick	6. Tom	6. fire
7. top	7. hug	7. clif(f)	7. poke	7. hear
8. ran	8. hut	8. sink	8. tore	8. real
9. say	9. far	9. cob	9. tow	9. tea
10. sad	10. hem	10. sod	10. cast	10. bee
11. jam	11. cup	11. fog	11. cane	11. care
12. sun	12. mate	12. tub	12. meat	12. deaf
13. tin	13. tent	13. cuf(f)	13. glas(s)	13. boat
14. rap	14. test	14. rush	14. Bev	14. cue
15. sand	15. rake	15. table	15. kind	15. too
16. tack	16. hide	16. sight	16. toss	16. out
17. sum	17. lock	17. mis(s)	17. team	17. pound
18. tab	18. made	18. Ron	18. most	18. cure
19. bag	19. came	19. for	19. rol(l)	19. nature
20. told	20. cape	20. ful(l)	20. bone	20. fur
21. rash	21. face	21. fact	21. pale	21. fir
22. fish	22. sang	22. taf(f)y	22. save	22. raid
	23. sank	23. cook	23. rove	23. auto
	24. song	24. nation	24. folly	24. boil
			25. sage	

offers enough repetition to bring about the conditioned effect when the consonant elements are seen within a whole word.

DECODING ABILITY SCREENING:

We have utilized a list of thirty words to screen for decoding ability. The first fifteen words are actual words that are most probably esoteric for the person being tested. Because these words will not be recognized at sight, they must, therefore, be decoded. The remaining fifteen words are "possible words" which also must be decoded. All the words can be decoded according to commonly accepted sound-symbol responses. The screening test and the recommended norms are listed below:

ESOTERIC	POSSIBLE
1. lashings	16. fentovite
2. astrolabe	17. nugsinbace
3. containing	18. bexnayhope
4. unforgivable	19. hurpolding
5. publishing	20. lishbarness
6. intervention	21. eckpidseep
7. determine	22. adzooler
8. refectory	23. hanfenbine
9. bombastic	24. nestanglock
10. fundamental	25. bishdegnuck
11. disturb	26. opdangunair
12. dimensions	27. edstolyack
13. reclamation	28. tuspurstim
14. abominable	29. torpelnink
15. yield	30. hawlatwight

RECOMMENDED NORMS - Decoding Only

Percent Correct	Indications
80 - 100%	No more instruction in decoding. Reading is the thing!
50 - 79%	Minimum instruction in decoding needed. Do oral at-sight reading in fifth level material.
25 - 49%	Normal grade level instruction in decoding. Do letter clustering in grade level material.
0 - 24%	Needs intensive remedial work if the student is in grade 3 or above. If below grade 3, a score in this range indicates need for basic instruction in decoding.

Words may be hand printed on separate cards or in list form at least three spaces apart. A response is considered correct if the letters in the word could sound the way the examinee made the response. For example, in the word *determine*, a correct response could include any one of the following: de-ter-min, det-er-min, de-ter-mine.

FINALLY...

It should be noted that actual training for perceptual conditioning is as simple as written. In fact, its very simplicity may cause problems. Many teachers, when they do apply the method, tend to add activities, which though acceptable in reading programs, only tend to

dilute the effects of working toward perceptual conditioning for decoding. GLASS-ANALYSIS does not include the utilization of pictures nor the writing of letters or words. It does not include a discussion of ideas which might be generated from the meaning of a word. (We are teaching Decoding, not Reading.) Socialization with the child is kept at a minimum so that as much of the time as possible will be used for learning to decode. Reading activities should not interfere nor dilute meaningful repetition of letters and sounds. (Our approach may represent an inadequate way to teach Reading, but it is effective in teaching Decoding.)

Reports from our teachers state that GLASS-ANALYSIS may teach children decoding but it is vulnerable to routineness for the teacher. It is unfortunate that this is so. But our experiences have been that when we add material to make it more colorful both for the teacher and the learner, we cause conditioning leakage and, thus, retard the acquisition of decoding skills. For some, particularly those with learning disabilities, this lessening of the perceptual conditioning effect may be crucial.

The materials needed can be teacher-made. These include carefully selected words (containing common letter clusters), preferably printed on flash cards and any controlled printed material that is at the learner's decoding level. Again, we are merely teaching *Decoding* and not the more complex dimensions of Reading. The Reading Program should continue at any time *after* the training session in Decoding is completed.

(Easier-to-Learn Materials, Box 329, Garden City, N.Y. publishes a program in Kit and Practice Book form that conforms to the theory of Perceptual Conditioning for Decoding. The materials are those called for in the Glass-Analysis Method.)